WHAT IS CLAIMED IS

1. An adhesive sheet having plural through holes running in about parallel with each other in the thickness direction of an organic film, wherein each through hole has an about congruent section in the diameter direction from one opening thereof to the other opening thereof and is surrounded by an organic material layer having a softening temperature higher by 10°C or more than the softening temperature of the organic film.

2. The porous adhesive sheet of claim 1, wherein the through hole maintains its opening even after adhesion.

3.

4. The porous adhesive sheet of claim 1, which comprises, on at least one side of the organic film, an adhesive material layer having the entirety or a part of the through holes present in the organic film and plural communication holes communicating in said thickness direction, wherein the adhesive material layer is composed of a thermoplastic resin or thermosetting polymer having a softening temperature lower than that of the organic film by 10°C - 30°C, and has such thickness as not to close up the through holes in the organic film in an adhesion state.

5. The porous adhesive sheet of claim 1, which comprises, on at least one side of the organic film, an adhesive material layer having the entirety or a part of the through holes present in the organic film and plural communication holes communicating in said thickness direction, wherein the adhesive material layer is composed of a thermosetting oligomer having a melt start temperature lower than the softening temperature of the organic film by

not less than 10°C, and has such thickness as not to close up the through holes in the organic film in an adhesion state.

6. The porous adhesive sheet of claim 1, 2, 4 or 5, wherein, when at least a part of the through holes are filled with a conductive material, respective conductive materials are insulated from each other.

7. (amended) A production method of a porous adhesive sheet having plural through holes running in about parallel with each other in the thickness direction of an adhesive organic film, which are surrounded by an organic material layer having a softening temperature higher by 10°C or more than the softening temperature of the organic film, which method comprises a step for forming a wire-containing film, comprising covering the wire with an organic material having a softening temperature higher by 10°C or more than the softening temperature of the adhesive organic film and forming a wire-containing film, such that plural wires run in about parallel with each other in the thickness direction of the adhesive organic film, and a wire-removing step for removing the wire in the organic film.

8.

9. The production method of claim 7, further comprising, between the aforementioned step for forming a wire-containing film and the wire-removing step, a wire protrusion step for protruding a wire end on at least one surface side of the wire-containing film from the film surface, and an adhesive material layer-forming step for forming an adhesive material layer composed of a thermoplastic resin or thermosetting polymer having a softening temperature lower than that of the organic film by 10°C - 30°C, which fills a difference between the aforementioned wire protrusion and the film surface.

10. The production method of claim 7, further

comprising, between the aforementioned step for forming a wire-containing film and the wire-removing step, a wire protrusion step for protruding a wire end on at least one surface side of the wire-containing film from the film surface, and a step for forming an adhesive material layer composed of a thermosetting oligomer having a melt start temperature lower than the softening temperature of the organic film by not less than 10°C, which fills a difference between the aforementioned wire protrusion and the film surface.

11. The production method of claim 7, 9 or 10, wherein the wires are insulated from each other.

12. A semiconductor wafer with a porous adhesive sheet, which comprises a semiconductor wafer having at least one electrode on at least one surface thereof, the porous adhesive sheet of claim 6, which is adhered to said surface of the semiconductor wafer, and a conductive part formed by filling each through hole located on the electrode of the semiconductor wafer of the porous adhesive sheet with a conductive material.

13. A production method of a semiconductor wafer with a porous adhesive sheet, which comprises an adhesion step for adhering the porous adhesive sheet of claim 6 onto at least one surface of a semiconductor wafer having at least one electrode on at least one surface thereof, and a conductive part-forming step for filling a through hole located on the electrode of the semiconductor wafer of the porous adhesive sheet with a conductive material and joining the electrode and the conductive material.